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**IMPULSE**

**Impulse Telecommunications Corporation**

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Dallas, Texas 75230  
(214) 490-8847 • FAX (214) 490-9061

June 2, 1994

RECEIVED

JUN 2 1994

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554  
STOP CODE: 1170

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

**Re: Ex Parte Presentation in PP Docket No. 93-253**

Dear Mr. Caton:

This notice is given as required by Section 1.1206(a)(2) of the Commission's rules. An original and one copy of this letter and its attachments are being filed.

This morning, the undersigned, other executives of Impulse Telecommunications, Inc. ("Impulse"), and its counsel met with Robert Gipps, Deputy Chief, Office of Plans and Policy, to discuss Impulse's positions regarding the above-referenced proceeding. In particular, Impulse emphasized the need for the FCC to adopt rules that give small businesses the ability to raise capital and participate meaningfully in auctions for broadband Personal Communications Services. Impulse underscored the need for small businesses to have the opportunity to bid for 30 MHz licenses defined by Basic Trading Areas.

Attached hereto is a copy of documents made available during the meeting, which outline Impulse's presentation.

If there are any questions regarding this matter, please contact the undersigned.

Respectfully submitted,



Edward E. Jungerman  
President

Attachments  
cc: Robert Gipps (w/o att.)

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# **SWMR Participation in Broadband PCS**

**Ex parte Presentation to the FCC  
PP Docket No. 93-253  
June 2, 1994**

**Edward E. Jungerman, President  
C. Jackson Pfeffer, Vice President  
Lewis S. White, Vice President**

***Impulse Telecommunications Corporation***

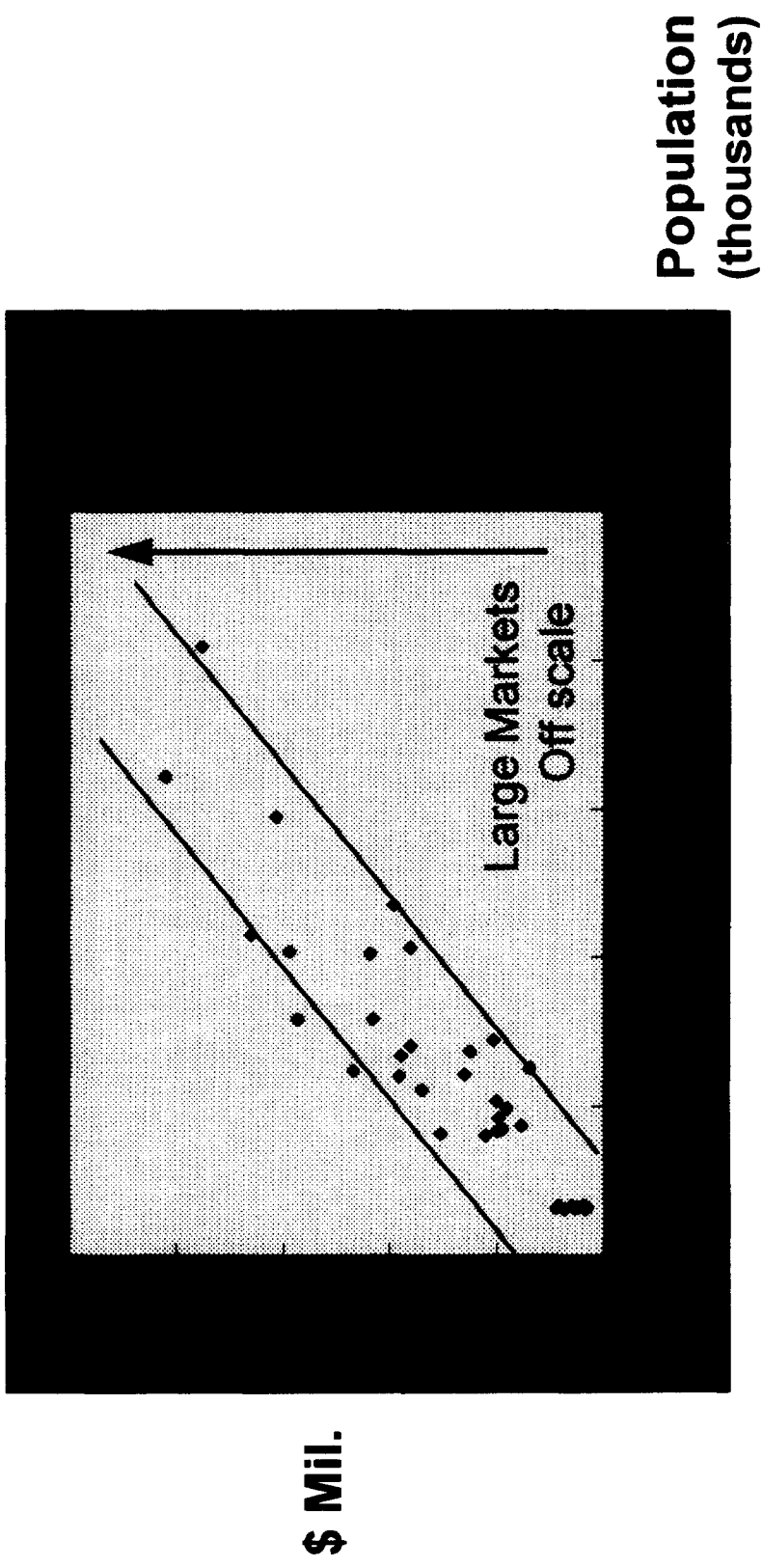
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Dallas, Texas 75230  
(214) 490-8847 Fax: (214) 490-9061**

# ***Impulse Telecommunications Corporation***

- ❖ **A Small Business**
- ❖ **Since 1986**
  - **Strategic Consulting & Engineering**
- ❖ **Since 1990: PCS Focus**
  - **Strategic & Business Planning**
  - **Systems Design & Engineering**
  - **Market Research**
  - **Regulatory Support**
  - **Wireless Industry Simulation Tool (WIST)**
- ❖ **Support to over 60 Clients**

***Impulse has PCS Expertise***

# *Representative BTA License Values*



***Major Market Values are High***

## *Giants can Justify Huge Bids*

### ❖ **Billions of Capital**

- AT&T/ McCaw
- Bell/ Atlantic/ TCI
- MCI/British Tel

### ❖ **Strategic Value**

- Critical wireless access
- Deny market to competitor

### ❖ **In-place Assets Permit Incremental Analysis**

- Admin., billing, operations, marketing
- Other business interests
- Existing facilities

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#### **Example: AT&T/McCaw**

<b>Offer</b>	<b>\$12.6</b>
<b>Liab. assumed</b>	<b><u>8.5</u></b>
	<b>21.1</b>
<b>Assets acquired</b>	<b><u>(3.5)</u></b>
<b>Net intangible</b>	<b>\$17.6</b>
	<b>Billions</b>

## *Bidding Against Giants*

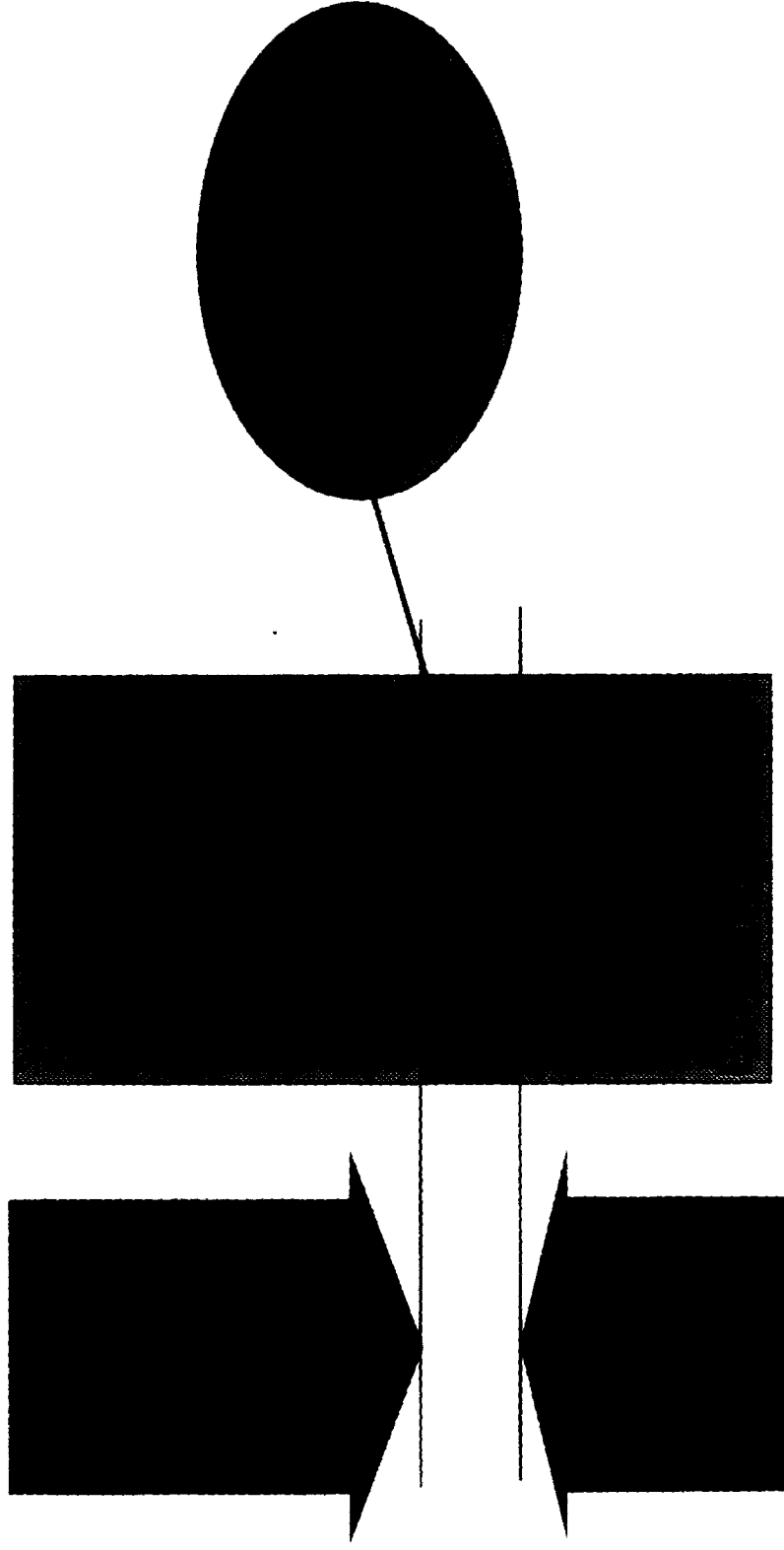
- ❖ **SWMR Risk capital: 35% IRR (or more) required**
- ❖ **Giants cost of capital: 12 to 15%**
- ❖ **Giants have access to abundant debt & equity**
- ❖ **Conclusion: SWMRs need help to bid successfully**

## ***SWMR Requirements for Participation***

- ❖ **Need 20 - 30 MHz to be Viable**
  - 10 MHz cannot compete with cellular
- ❖ **Need Access to Larger BTA Markets**
  - Support multi-party competition
  - Cost threshold
  - Attract capital
  - Facilitate national SWMR “Roamer” cooperation

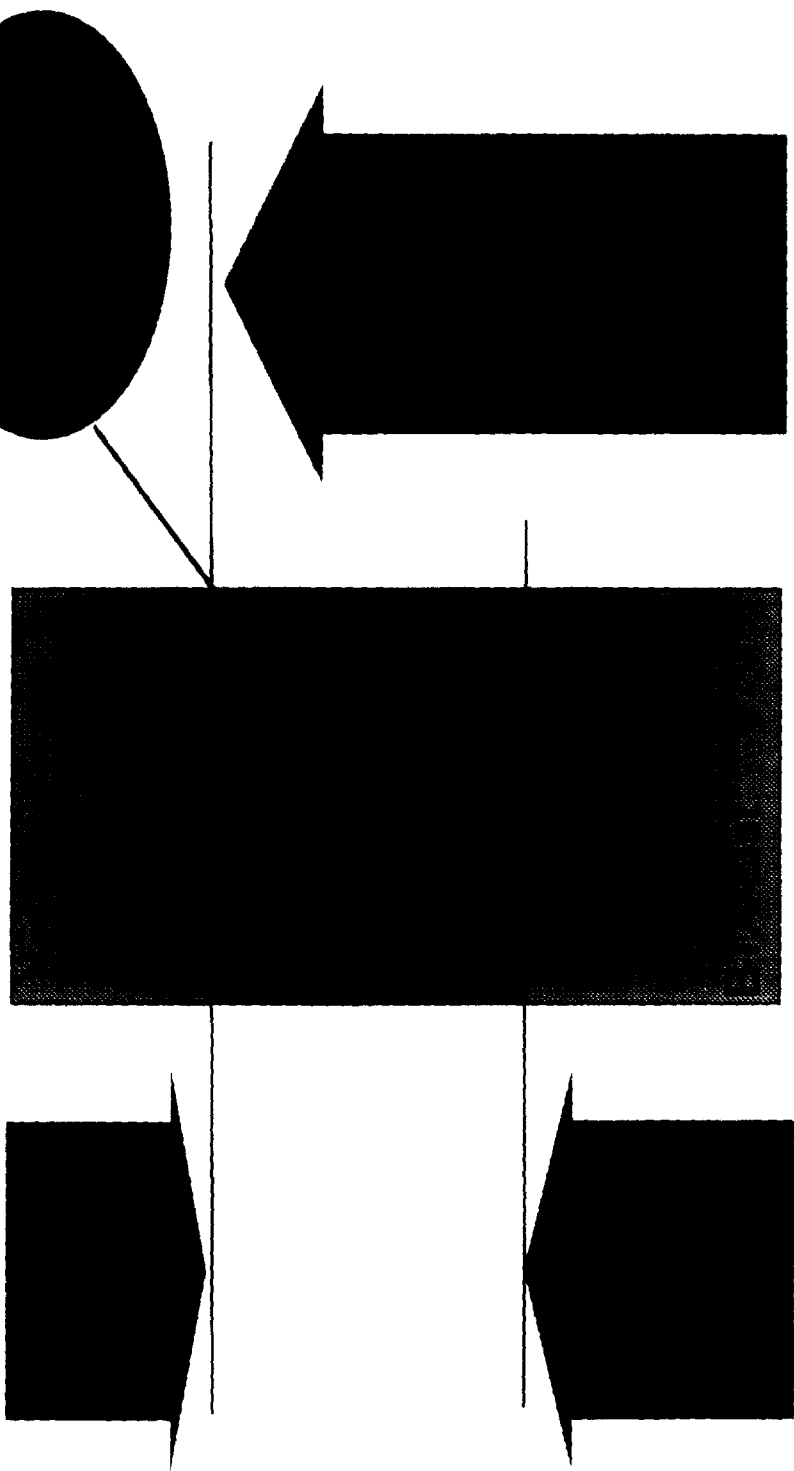


*Can SWMRs Get on the Field?*



***SWMR Participation Very Limited***

*How SWMRs Get On Field*



***Revised Rules = Enhanced SWMR opportunity***

## *Proposed Solutions*

- ❖ **Reduce Down Payment for Small Business**
- ❖ **Allow Pre-arranged Financing Commitments**
- ❖ **Change Small Business Definition**
- ❖ **Adopt Unjust Enrichment Protections**

## *Solutions - Debt*

### ❖ **Reduce Down Payment for Small Business**

- **FCC adopted 20 % for Narrowband PCS**
- **Broadband PCS bids will be far higher**
- **Recommend 5% down payment**
- **Recommend 36 month installment moratorium**

### ❖ **Benefits**

- **Permits SWMRs with equity to compete with giants**
- **For Government:**
  - ◆ **More bidding competition**
  - ◆ **Increased auction revenues**

## *Solutions - Equity*

### ❖ **Allow Pre-arranged Financing Commitments**

- Should not affect “small business” status
- Modify affiliation rules:
  - ♦ No ultimate source greater than 10%
  - ♦ Look through financing structure to ultimate source  
(Affiliation rules apply only to ultimate source)
- Exempt convertible securities exercisable after 5 years

### ❖ **Benefits**

- Gives SWMR access to equity
- Prevents abuse by giants

## *Solutions - Bidding Power*

### ❖ **Change Small Business Definition**

- **\$6 Million net worth test limits access to equity**
- **Net worth test unfair to established small businesses**
- **Substitute revenue (\$40 M?) for net worth test**

### ❖ **Benefits**

- **Attracts equity capital**
- **Allows sufficient “critical mass” to compete**
- **Prevents abuse by giants**  
(“Affiliate” revenues disqualify)

## *Solutions - Abuse*

### ❖ **Adopt Unjust Enrichment Protections**

- Prohibit transfer of license before 5 years
- Recover full value of any and all preferences
- Collect interest on the preference value

### ❖ **Benefits**

- Prevents giants from benefiting from preferences
- Encourages SWMRs to build viable businesses

PCS Comm, 20 MHz, BTA		Run: 35.0% 2004 IRR on seed equity PCS Comm, 20 MHz, BTA															
Cash Flow Statement		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Operating Sources</b>																	
EBITDA		-2.3	-8.2	-9.1	-8.3	-6.1	-2.8	1.1	5.0	9.2	13.6	18.2	23.0	28.1	33.4	38.5	43.6
<b>Operating (Uses)</b>																	
Minimum Cash		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts Receivable		0.0	0.0	-0.1	-0.3	-0.6	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Other Current Assets		-0.1	-0.4	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Current Liabilities (Excl STD)		0.2	0.5	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Operating Working Capital		0.0	0.1	0.0	-0.2	-0.4	-0.6	-0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
<b>Capital Expenditures</b>																	
Other		-1.8	-6.1	-3.5	-1.6	-2.0	-0.2	-1.5	-2.1	-2.4	-2.5	-2.9	-3.2	-3.4	-3.5	-3.5	-3.5
Intangible - License		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Operating Uses		-1.8	-6.0	-3.4	-1.8	-2.4	-0.8	-2.2	-2.9	-3.2	-3.3	-3.7	-4.0	-4.3	-4.3	-4.3	-4.3
<b>Net Cash From Operations</b>		-4.0	-14.2	-12.6	-10.0	-8.5	-3.6	-1.1	2.1	6.0	10.3	14.4	19.0	23.8	29.1	34.1	39.2
<b>Financing (Uses)</b>																	
Interest Expense		-2.4	-2.5	-2.8	-2.7	-2.5	-2.2	-1.8	-1.6	-1.4	-1.1	-0.7	-0.6	-0.4	-0.1	-0.1	-0.1
Principal Repayment, License Debt		0.0	0.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	0.0	0.0	0.0	0.0	0.0	0.0
Principal Repayment, Equipment Debt		0.0	0.0	-0.3	-1.9	-2.1	-2.3	-2.3	-2.2	-1.4	-1.7	-1.3	-1.1	-0.8	-0.8	-0.6	-0.3
Principal Repayment, Short Term Debt		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	-3.4	0.0	0.0	0.0	0.0
Taxes - current		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-9.5	-12.1	-15.3
Dividends		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Financing Uses		-2.4	-2.5	-8.2	-9.6	-9.6	-9.5	-9.1	-8.8	-7.8	-7.8	-4.4	-5.1	-1.2	-10.4	-12.8	-15.7
<b>Cash Surplus (Requirement)</b>		-113	-16.7	-20.7	-19.6	-18.1	-13.1	-10.3	-6.7	-1.8	2.4	10.0	13.9	22.6	18.7	21.3	23.6
<b>Financing Sources</b>																	
Short-Term Debt		0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Long-Term Debt - Capital Equipment		1.6	5.5	3.1	1.4	1.8	0.1	1.3	1.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Equity	89	4.8	11.3	17.6	18.2	16.3	12.9	6.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Financing Sources		6.4	16.7	20.7	19.6	18.1	13.1	10.3	6.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>CHANGE IN CASH SURPLUS</b>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4	10.0	13.9	22.6	18.7	21.3	23.6
Change in Minimum Cash		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beginning Cash		0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5	3.0	13.0	26.9	49.5	68.2	89.5
<b>ENDING CASH</b>		0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5	3.0	13.0	26.9	49.5	68.2	89.5	113.1

All values in \$M

Assumed bid: \$50M  
 Financing needs until positive cash flow: \$113M  
 New equity requirements: \$89M



## Traffic and Plant Summary

Subscriber Activity		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Coverage	% pop	0%	47%	69%	78%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%	88%
Subscribers	K	0	0	1	5	11	19	26	35	44	53	63	72	82	91	101	110
Penetration	% pop	0.0%	0.0%	0.1%	0.3%	0.6%	0.9%	1.3%	1.7%	2.1%	2.5%	2.9%	3.3%	3.7%	4.0%	4.4%	4.7%
Churn loss	K	0	0	0	1	4	7	10	12	14	15	17	19	21	23	24	26
Gross adds	K	0	0	1	5	10	15	18	20	23	25	27	29	30	32	34	36
Net adds	K		0	1	4	6	8	8	8	9	9	10	10	10	10	9	9
Churn rate	% per month				3.2%	4.3%	4.0%	3.7%	3.2%	2.9%	2.6%	2.5%	2.3%	2.2%	2.2%	2.1%	2.1%
Subscriber growth rate	% yr-yr				420%	119%	70%	41%	32%	26%	21%	18%	15%	13%	12%	10%	9%
System Traffic		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Local air time per subscriber	min/mo	0	0	247	249	251	255	259	263	268	273	279	284	289	294	300	305
Toll air time per subscriber	min/mo	0	0	9	11	13	14	15	15	15	15	15	15	15	15	15	15
Total air time	min/mo	0	0	256	260	264	269	274	278	284	289	294	299	305	310	315	320
Monthly total air time	M min/mo	0	0	0	1	3	5	7	10	12	15	18	22	25	28	32	35
Busy Hour air time	K Erlangs	0.0	0.0	0.0	0.1	0.3	0.6	0.8	1.1	1.4	1.7	2.1	2.5	2.8	3.2	3.6	4.0
Calls per subscriber	Calls/mo			60	59	59	58	58	58	58	58	58	58	58	58	59	59
Monthly total calls	M Calls/mo	0	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6
Busy Hour calls	K Calls/hour	0	0	0	2	4	7	10	14	17	21	25	28	32	36	40	44
IN messages	avg msg/call	0.0	0.0	0.8	1.0	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Monthly total messages	M msg/mo	0	0	0	0	1	1	2	3	4	4	5	6	7	8	8	9
Busy hour messages	K msg/hour	0	0	1	3	7	12	17	22	27	32	38	44	49	55	61	66
System Equipment		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Outdoor channels	K	0.0	0.6	1.0	1.2	1.4	1.4	1.8	2.2	2.8	3.3	3.9	4.6	5.3	6.0	6.7	7.5
Subscribers per channel	#		0	1	4	8	13	15	16	16	16	16	16	15	15	15	15
Outdoor cells	#	0	26	42	49	58	58	58	58	58	58	62	68	77	86	96	107
Average channels/cell	#		24	24	24	24	25	30	38	47	57	64	68	69	70	70	70
Average cell area	sq km	0	0	88	170	196	303	303	303	303	303	286	260	230	206	184	165
Indoor picocells	#	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cell to BSC links (T1s)	#	0	31	49	58	69	70	86	109	135	163	193	226	260	295	330	367
Base Station Controllers	#	0	3	5	6	7	7	7	7	7	7	7	7	7	7	7	7
Cells per BSC	#		9	8	8	8	8	8	8	8	8	9	10	11	12	14	15
BSC to Switch links (T1s)	#	0	31	49	58	69	70	86	109	135	163	193	226	260	295	330	367
Switches	#	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Switch ports	K	0.0	1.5	2.4	2.8	3.3	3.4	4.1	5.2	6.5	7.8	9.3	10.8	12.5	14.1	15.9	17.6
STP links (56 kbps)	#	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
subs/switch port			0	0	2	3	6	6	7	7	7	7	7	7	6	6	6
Annual Capital Equipment Costs		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cell equipment	\$M	1.6	3.2	2.8	1.2	1.6	0.1	1.0	1.5	1.7	1.8	2.1	2.4	2.7	2.7	2.8	2.8
BSC equipment	\$M	0.2	0.5	0.5	0.2	0.2	0.0	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Switch equipment	\$M	0.0	1.4	0.2	0.1	0.1	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total capital equipment	\$M	1.8	6.1	3.5	1.6	2.0	0.2	1.5	2.1	2.4	2.5	2.9	3.2	3.4	3.5	3.5	3.5
Average cost per growth subscriber	\$			3590	382	331	21	193	254	271	274	305	333	357	363	373	378
Depreciation on capital eqpt	\$M	0.3	1.1	1.6	1.8	2.1	2.2	2.4	2.4	1.9	1.8	1.9	2.1	2.6	2.9	3.1	3.2
Cumulative capital equipment costs	\$M	1.8	7.9	11.4	12.9	14.9	15.1	16.6	18.7	21.1	23.7	26.6	29.8	33.2	36.7	40.2	43.8
Average cost per pop	\$	\$1	\$4	\$6	\$7	\$8	\$8	\$8	\$9	\$10	\$11	\$12	\$14	\$15	\$16	\$17	\$19
Average cost per busy hour Erlang	\$K			404.3	86.9	45.1	26.4	20.2	17.0	15.0	13.6	12.7	12.1	11.7	11.4	11.1	10.9
Cost per cell	\$K		302	272	264	255	258	283	320	361	405	430	437	432	426	418	409